

ART. II. *Case of Osteo-sarcoma of the Lower Jaw, successfully treated by Amputation of that Bone.* By WILLIAM W. ANDERSON, of Stateburg, South Carolina. (Communicated by Professor GIBSON.)

ABOUT the middle of December, 1829, I was requested by Colonel S. to examine one of his negro men, (Tom, an African,) who was suffering great pain and inconvenience from a large tumour of the lower jaw, and to give my opinion whether or not it could be successfully removed by an operation. The plantation where the negro lived being sixteen miles from Stateburg, it was not convenient for me to go so far until the last of the month, when I went to see him, and discovered his disease to be an osteo-sarcoma of the lower jaw of great size, and of twelve or thirteen years standing. Tom was about forty-five years of age, in other respects healthy and possessed a robust and strong constitution. When the disease first made its appearance he was hired out on a neighbouring plantation, and his master did not know in what manner it commenced; but according to his own account it was occasioned by a severe blow which he received on his jaw. It continued small and grew very slowly for several years, after which it frequently broke and discharged an ill-conditioned and fœtid humour and increased rapidly. At this time the tumour extending from the next to the last molar tooth on the left side, to the angle on the other, involving nearly the whole of the lower jaw in the disease; but the great body of it lay on the right side and in front of the mouth. The chin entirely deformed, projected ten inches beyond the neck, distending and protruding the under lip so far beyond its natural position, as to make it impossible for him to shut his mouth. The tongue was raised up and pushed from its place to the left side of the mouth, and confined in such a manner as to make deglutition difficult and render his articulation so indistinct that he could scarcely be understood. Externally the tumour presented a pretty even and uniform surface with the exception of some fistulous openings and the scars of others which had healed; but that portion of it which was to be seen within the mouth was very irregular, having deep indentations and fissures running in different directions and openings, which were constantly discharging their fœtid matter mixed with saliva. All this portion of it was of a deep florid colour. Altogether the disease exhibited a loathsome and frightful appearance, and rendered the life of the poor negro almost insupportable. The extent and difficulty of the operation were explained to him; being at the same time encouraged by the probability of its successful termination;

he readily consented to have it performed. He was accordingly sent to me in a few days, and on the 14th January, 1830, in the presence of Dr. RICHARD ANDERSON, of Chesterville, Dr. YATES of this place, and several spectators, and particularly assisted by Dr. E. H. ANDERSON of Camden, I removed the tumour in the following manner.

Being seated in a chair and his beard shaven, the dimensions of the tumour were first taken. From the lobe of one ear to that of the other across the chin, it measured eighteen inches; from the lobe of the right ear to the termination of the disease on the other side, fifteen and a half inches; and from the trachea to the edge of the lower lip, ten and a half inches; and when removed, weighed within one ounce of three pounds.

The operation was commenced by making an incision from the side of the neck on the right side to the angle of the jaw on the left, passing under the chin in such manner as to ensure a large flap, which was dissected down to the neck. Then another incision was made between the same points, following the direction of the jaw, passing some distance below the angles of the mouth, and leaving out all that portion of the skin which had become diseased—another flap was formed by dissecting the integuments from the upper side of the tumour. It is worthy of remark, that the chief difficulty occurred in performing this part of the operation, occasioned by a profuse hæmorrhage which could not easily be stopped by ligatures; for besides the fascial artery and some small branches which were easily secured, some large blood-vessels lying immediately on the surface of the tumour, which seemed to be entirely venous, were divided and bled so profusely that in a short time syncope was induced. It now became necessary to remove him from his seat, and place him in a horizontal posture, which occasioned a little delay; but the hæmorrhage ceased and the operation was continued by exposing the bone near to the tooth next to the last grinder on the left side, and dividing it as expeditiously as possible, with a metacarpal saw fixed for the purpose in the handle of a file. The soft parts were now divided, and the tumour removed by passing the scalpel through the diseased bone, on the right side where it was very much enlarged, hollow and as soft as cartilage, leaving a portion of diseased bone at the angle of the jaw, which it was indispensable to remove to ensure the success of the operation. This was done with as little delay as possible, but was more tedious than the division on the opposite side, on account of its position and the bone being broader and less firmly fixed. There was no hæmorrhage after the fainting to retard the operation, nor did any occur after the circulation of the blood was fully restored.

The blood being washed clean from the wound, and no further hæmorrhage supervening after the patient had sufficiently revived, the flaps were brought together and united by the interrupted suture with strips of adhesive plaster between the stitches. A compress of soft rags and bandage formed by a roller passing under the chin, and over the head, and then round the head to secure it in its place, completed the dressings. He was very much exhausted by the operation, and when put to bed his pulse was extremely languid. He however breathed easily and made no complaint.

15th. Rested well through the night, does not complain of much pain; pulse still languid, moves his tongue with facility, and articulates distinctly enough to be understood. *Evening.* Swallows with ease, and has taken in the course of the day a pint of arrow-root, made by pouring a pint of boiling water on a table-spoonful of the arrow-root, first mixed with a little cold water. It was sweetened and given to him through a small funnel.

16th. Rested well last night, but complains more of pain this morning; has some head-ache, pulse fuller and more frequent, but no fever; has had no evacuation from the bowels since the operation; ordered a purgative enema. *Evening.* Enema produced two copious stools which relieved his head; has taken to-day a quart of arrow-root prepared with equal parts of milk and water, and sweetened with brown sugar.

17th. Rested tolerably well; complains of head-ache, and feels very uncomfortable; suppuration copious, removed the bandages, washed the wound and dressed it, as at first, after which he took his arrow-root, and felt more comfortable. *Evening.* Has had a natural evacuation, pulse eighty-two, soft and regular.

18th. Rested well last night, pulse eighty-six, and soft; takes nourishment well, bowels easy; wound suppurates freely, and a considerable space on the right side not united by the first intention; regret that I had not made use of the twisted instead of the common interrupted suture, as this last has not prevented the skin from folding inwards and separating the cut edges.

19th. Doing well, cavity of wound filling up with healthy granulations, appetite good, evacuations regular, rests well.

21st. Removed the common sutures from that portion of the integuments on the right side, which did not unite by the first intention, and made two quilled sutures.

25th. Continues free from fever, rests well, has good appetite, takes nourishment freely, articulates better, and improves daily in his appearance. The quilled sutures have answered completely the intention.

tion of keeping the edges of the integuments in apposition. The tongue which has been furred since the operation, is now quite clean.

From this time every thing went on well, the healing process though slow was not interrupted by any untoward circumstance. He grew tired of liquid food, and about the middle of February began to eat rice and milk, homminy and milk, and sometimes molasses instead of milk. On the first of March, he was able to go about and assisted of his own accord some carpenters who were at work near his house in handing their tools, holding the timbers which they were hewing and the like. There was still a small opening through the cheek through which particles of food passed whenever he eat. I neglected him somewhat, and it remained so for some time. It became necessary to touch it with caustic, and to apply a strip of adhesive plaster, which had the desired effect, and in a short time it was entirely healed, except a hole about the size of a small quill which was again neglected, and remained so until about the first of May, saliva and small articles of food passing through it, when the caustic was again applied, both externally and inside of the cheek with the same good effect. It now healed up entirely, and has remained well to the present time, just two years having elapsed. Tom expressed such a strong desire to live with me, that I purchased him, and he has been a constant labourer on my plantation ever since. I hear of no difficulty about his eating, and he has not during that time to my knowledge been stopped from his work by any sickness, except a slight attack of bilious fever last autumn, and a small hurt which he received by a fall from a wagon. The disease appears to be entirely eradicated, and the flesh is as firm and sound there as in any part of his body. The flaps were very large, and in healing formed a fold in front of the scar left by the wound in such a manner as to supply in some measure the place of a chin, and he is by no means as much disfigured as one might suppose a person would be who had lost almost the whole of his lower jaw bone. The deformity is not so great as to attract particular notice, or to render his appearance disagreeable.

*Stateburg, South Carolina, May 4th, 1832.*